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ABSTRACT

Characteristics and qualifications of an effective educator in engineering and liberal arts colleges have been examined. Engineering technology colleges are unique in their purpose and methods and require unique faculty. Through a survey of students, alumni, faculty, and administrators, this study identifies six characteristics indicative of an effective educator in an engineering technology environment. They are: enthusiasm, practicability, leadership, communications skills, industrial experience, and education. The findings have been passed to the faculty screening committees at the Southern Technical Institute with the recommendation that applications for teaching positions be subjectively evaluated against the criteria. (Author/LBH)

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THE DETERMINATION OF A SET OF CHARACTERISTICS TO BE USED IN THE SELECTION OF NEW ENGINEERING TECHNOLOGY FACULTY MEMBERS AT THE SOUTHERN TECHNICAL INSTITUTE

COLLEGE GOVERNANCE

by

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A PRACTICUM PRESENTED TO NOVA UNIVERSITY
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DEGREE OF DOCTOR OF EDUCATION

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ABSTRACT

Significant research has been conducted to determine those characteristics and qualifications thought to be indicative of an effective educator in engineering and liberal arts colleges. Engineering technology colleges, however, are unique in their purpose and methods and require unique faculty. Through a survey of students, alumni, faculty and administrators, this study identifies 6 characteristics indicative of an effective educator in an engineering technology environment. The characteristics are:

a. Enthusiasm

b. Practicability

c. Leadership

d. Communications skills

e. Industrial Experience

f. Education

The findings have been passed to the faculty screening committees at the Southern Technical Institute with the recommendation that applications for teaching positions be subjectively evaluated against the criteria.

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Introduction

There have been volumes written describing the desirable characteristics and qualifications for college faculty members. These writings, however, have almost universally been directed towards the faculty of liberal arts or science and engineering colleges. Little or no investigation has been undertaken to determine the characteristics felt most desirable for the faculty of colleges of engineering technology. In the words of Dr. Walter O. Carlson, Dean and Executive Director of Southern Technical Institute, "Colleges of Engineering Technology are unique in their purpose and methods and as such require a faculty with special qualifications and characteristics. Although research and publications are noteworthy accomplishments, effective teaching and ability to relate classroom studies to real world industrial experiences are more desirable attributes for our faculty."

It was the purpose of this practicum to develop a list of characteristics and qualifications thought to be indicative of an effective engineering technology educator. This list was then to be furnished to the screening committees to be used as a guide in the evaluation of applicants for faculty positions at the Southern Technical Institute.

Background and Significance

The Southern Technical Institute is a coeducational residential college for day and evening students. It is a part of the University System of Georgia, and that unit of the Georgia Institute of Technology dedicated to the educational development

of engineering technologists. The college, which is located on a separate campus from Georgia Tech has a student body of approximately 2000 and a faculty of 75 full time professional educators. Bachelor degrees are granted in Apparel, Architectural, Civil, Electrical, Industrial, Mechanical, and Textile Engineering Technology. Engineering Technology as defined by the Engineering Council for Professional Development, the accrediting authority for colleges of engineering and engineering technology, is "...part of a continuum extending from the craftsman to the engineer, it requires the application of scientific and engineering principles in support of engineering activities."(8:89)

In his book, Governance for the Two Year College, Richard C. Richardson states, "The recruitment and selection of new faculty is the most important single factor in the success of any organization."(14:162-163) Southern Technical Institute currently has nine teaching faculty vacancies which are being filled for the 1976-77 academic year. Departmental screening committees have been appointed, applications have been solicited, and the selection process is under way. The only definitive guidelines originally available to the screening committee, however, were those minimum qualifications established by the Engineering Council for Professional Development--"The technical faculty should hold a basic technical degree in engineering, science, or technology with...emphasis on the master's as a terminal degree, with relevant industrial experience..., and competence as a teacher."(8:93) The Screening Committee had little difficulty in assessing the educational and industrial

qualifications of the applicants. However, the determination of "competence as a teacher" has been more difficult. The list of characteristics and qualifications which are derived from this study should aid in the identification of an effective teacher in an engineering technology environment and provide the screening committee with a valuable tool in the performance of their "most important" function.

A Review of the Literature

Researcher after researcher and author after author has attempted to define the characteristics which, when found in one person, identify him as an effective teacher. For example, Oliver Kolstoe reports that the results of his research indicate that such things as appearance, training, experience, and field of specialization are all irrelevant as measures of teacher effectiveness. He goes on to state that "The principle characteristic of an effective teacher is that he is well prepared for his class and does a good job of communicating with his students."(11:80-81)

On the other end of the spectrum, Subkoviak and Levin, writing in the Journal of Educational Measurement report that when faculty members are asked to define the characteristics of an ideal professor they consistantly list research, scholarly achievement and service on a par with teaching. Subkoviak and Levin are quick to point out, however, that students characterize a professor almost solely on the basis of teaching, interpersonal relationships, and student related activities. "This is in line,"

say the authors, "with the popular student complaint that faculty place too much emphasis on research and not enough on classroom and student related responsibilities."(16:269-275)

Another opinion is provided by Sherman and Blackburn, who writing in the Journal of Educational Psychology state, "an instructor's skill in organizing and managing his course requirements is a necessary but not sufficient condition for achieving effectiveness in the classroom. It is the personal qualities which the instructor as an individual brings to the educational setting that spell the difference between success and failure as a teacher."(15:124-131) Based on this premise, the authors conducted a rigorous study in an attempt to define the characteristics which make up those personal factors they believe to be so relevant to a good teacher. They found that potency as a teacher was correlated with aggressiveness, boldness and extroversion; that a pragmatic approach to teaching was essential; and that characteristics of friendliness, goodwill, open-mindedness and sensitiveness were especially important.

Sherman and Blackburn's conclusions are interesting when contrasted with Alvin Toffler's description of college professors as written in his book, Future Shock--"University professors constitute a priestly caste dispensing education like a sacrement. Few innovations or changes emanating from outside the monopoly exercised by this professional clergy stand much of a chance of being approved or adopted..."(18:153) Dragoljub Najman writing in UNESCO Courier agrees with Toffler's analysis of the present condition and suggests that "There can be no real reform of

higher education unless a radical change is made in the selection and composition of the teaching staff. The doors should be immediately opened wide to those who, although they may not possess degrees or doctorates, nevertheless have vast experience in their own specialities. Vigorous action is needed to ensure that teaching staff are recruited solely on the basis of competence, even if it means recruiting part-time staff."(12:24-26)

Wayne H. Davis, writing in Bioscience, sums up the view of many of his colleagues when he points out that degrees and training alone do not make an effective teacher. Quoting from personal experience, Davis states, "We have been swamped with applications from people who have the required qualifications. From among these, our committee invited three or four of the top prospects to conduct seminars. Never have I seen such excellent qualifications in terms of academic records, publications, and glowing recommendations from so many of the top scientists at our best universities. Yet never have I encountered a poorer crop of potential faculty members."(4:769) Davis concludes that a personal interview is an absolute necessity in the evaluation of potential faculty and lends emphasis to the importance of an evaluation guide when performing a subjective assessment of teacher effectiveness.

Procedures

Two separate lists of characteristics thought to be indicative of an effective engineering technology professor, were compiled using different techniques and separate sources. The first list was obtained in a "Brainstorming" session with five

faculty members of the Southern Technical Institute degree granting departments. The brainstorming technique which is described by Alex Osborn in his work, Applied Imagination(13:498) is essentially a free wheeling group problem solving and idea generating technique in which spontaneity and mutual reinforcement are employed. Quantity was emphasized and judgment was deferred until a later time when the analysis was performed. The technique was appropriate for a faculty team since members were individually selected for their diverse backgrounds, creativity and ability to perform well in a team environment.

The second list of desirable characteristics was obtained from a class of seniors using the Nominal Group Technique (NGT) as described by Delbecq, et al, in their work, Group Techniques for Program Planning (6:41-69). This technique was particularly appropriate for a student group since it achieves active participation of everyone in the group without dominance by high-status members, more aggressive personalities, or more emotional members.

After the two independent lists were compiled, they were merged and duplication removed. At that time, the consolidated list was screened to remove any characteristic which might be in conflict with Equal Opportunity or Affirmative Action policies of the Institute. The list was then restructured into the form of a questionnaire consisting of thirty-five characteristics; each described by a single word and short amplifying phrase. The questionnaire, which is included as Appendix A to this report, was then distributed to students, alumni, faculty and

administrators in the following quantities:

Students - 20 from the day school and 15 from the evening school. All were enrolled in a senior level course required by each degree granting department (total - 35)

Alumni - Chosen on the basis of their success since graduation and willingness to cooperate in previous alumni activities (total - 25)

Faculty - Representatives of each degree granting and academic department on campus. Chosen on the basis of their availability during the summer quarter (total - 22)

Administration - The president and vice-president of Georgia Tech, the Southern Tech Deans, and each Department Head at Southern Tech (total - 20)

The respondents were asked to choose ten characteristics from the list that they felt to be very important for an engineering technology educator. They were instructed to next identify the five most important characteristics and as an indication of the relative importance allocate a total of 25 points among the five selected traits with the most important receiving the most points.

Results

Of the 102 ballots distributed, 71 were returned for participation of 70 percent. Respondents by category were as follows:

	Distributed	Returned	Percent Participation
Students	35	35	100%*
Alumni	25	11	44%
Faculty	22	14	64%
Administration	20	11	55%
Overall	102	71	70%

*High participation due to the fact that questionnaires were distributed during class and collected at the end of each period.

At the close of the balloting period the average importance score and percent of respondents voting for each characteristic were tabulated by respondent catagory (student, alumni, faculty, administration). Appendix B to this report is a tabulation of these values.

Since the computations of average importance score and percentages are an attempt to quantify a subjective evaluation, it is appropriate to eliminate some of the variability before proceeding with analysis or drawing conclusions. To this end, characteristics which were not listed among the top five by at least 25 percent of the repondents in any category were eliminated from consideration. As an attempt to further eliminate some of the subjective variability, any characteristic which was not selected by at least 25 percent of the respondents in at least two groups was eliminated from final consideration. Ten characteristics survived the double elimination process described above. Table I on Page 12 lists those characteristics along with

their respective average importance scores and selection percentages. It is from this list that the final selection was made.

Assumptions and Limitations

Before proceeding with the discussion and conclusion, it is appropriate to identify the assumptions and limitations inherent in this study.

If validity is to be attached to the results, it must be assumed that the respondents are capable and willing to identify the characteristics that are indicative of an effective engineering technology educator. This is a reasonable assumption. However, it is recognized that individuals may tend to be parochial in their judgments. For example, a professor with a Ph.D. but little industrial experience would probably rate education as more important than experience. In a similar manner, a slow student would probably rate "patience" as a very desirable characteristic while an advanced student would probably rate other characteristics as more important. The double elimination process previously described should remove a significant amount of the variability due to parochial interests.

A major limitation in this study is attributable to the fact that the study was conducted during the summer quarter, when some of the respondents were limited to summer students, and summer faculty. (The administration and alumni are not a function of academic quarter.) This could introduce some bias, which might be eliminated by gathering data in a different academic quarter. The time requirements for this paper did not permit such replication.

Discussion

The objective of this practicum was to develop a list of characteristics indicative of an effective engineering technology educator. An analysis of the data presented in Table 1 on Page 11 will lead directly to the accomplishment of that objective. There are however, some interesting observations which although not necessary in the accomplishment of the stated purpose, do provide an insight into faculty qualifications and are therefore worthy of some discussion at this point.

Observation of the raw data presented in Tables II through V of Appendix B reveals that not a single characteristic received 100% of the votes from any category of respondents yet four characteristics received absolutely no votes and seven characteristics received only 1 or 2 votes out of the 360 cast. This is a strong indication of characteristics not deemed important for an effective educator in an engineering technology environment. Some of these unimportant characteristics are surprising in light of the findings reported by Sherman and Blackburn(6:125) and the previous evaluation criteria used at Southern Tech. For example:

a. Not a single vote out of the 360 cast went to "18--Involvement--participates in extra curricular activities." Quite surprising since participation in extracurricular activities has long been a criterion for promotion at Southern Tech.

b. Very few (7 out of 360) were cast for "15--Teaching Experience--the more the better." This seems contrary to just about all traditional hiring policies.

c. Only one vote (and that was by a faculty member) was cast

TABLE 1

IMPORTANCE INDEX AND PERCENT OF VOTE, BY CATEGORY OF RESPONDENT, FOR THE 10 MOST FREQUENTLY SELECTED CHARACTERISTICS

	Students (35 Votes)		Faculty (14 Votes)		Administration (11 Votes)		Alumni (11 Votes)	
Characteristic	Index	% of Vote	Index	% of Vote	Index	% of Vote	Index	% of Vote
(2) Industrial Experience	1.1	25	1.8	21	3.7	72	2.5	45
(3) Education	2.1	37	1.0	21	3.1	45	1.7	27
(5) Innovativeness	1.9	34	1.1	21	2.6	63	1.0	27
(7) Attitude	1.4	29	2.7	50	.8	18	1.8	27
(9) Communications	2.7	46	3.1	57	.7	9	.16	27
(10) Enthusiasm	1.3	26	1.4	35	4.6	72	4.8	82
(11) Leadership	2.0	37	1.8	42	2.6	45	2.7	45
(24) Ethics	1.4	26	.9	14	1.2	27	.8	18
(27) Practicality	2.0	37	1.8	42	2.6	45	2.7	45
(29) Dedication	.6	14	2.6	42	1.7	36	.8	18

Notes:

(1) Index - Determined by Summing the importance scores cast for the characteristic and dividing by the number of respondents in the category.

(2) % of Vote - Determined by dividing the number of votes cast for the characteristic by the number of respondents in the category.

for "28--Cooperativeness--willing to accept committee assignments and night schedule." Surely one would expect this to be supported by the administration.

Other characteristics found to be of minimal importance were:

a. 1--Appearance--well groomed, neat, clean
b. 14--Age and maturity--between 30 and 50 years old
c. 16--Membership in professional organizations--ASEE, NSPE, AIIE, ASME, etc.
d. 17--Publication--has written articles or books on subjects taught
e. 19--Charisma--attractive personality
f. 20--Personal enrichment--involved in hobbies and non-academic activities
g. 21--Peer compatibility--gets along well with colleagues
h. 25--Ethical--maintains a high professional standard
i. 32--Financial status--ability to accept low salary without personal hardship

Returning now to the stated purpose of identifying the important traits, it will be noted that in Table 1 on the previous page, only three characteristics received significant support (above 25 percent) from all four categories of respondents. They were:

a. 10--Enthusiasm--enthusiastic about engineering technology, the school and the students
b. 11--Leadership--is in control of the learning environment and able to motivate through desire not fear

c. 27--Practicality--more interested in applications than theoretical development

If this study has validity, these three characteristics must be listed as highly indicative of an effective technology professor. It is interesting to note that all three characteristics are personality traits and have little to do with training, experience or intelligence. This is in direct correlation with the independent findings of Kolstoe, Davis, and Sherman and Blackburn as related previously in this report.

Analysis of the remaining characteristics listed in Table I reveals the following:

a. "2--Industrial experience--at least 2 years within the past 10." Received high support from the administration and alumni, adequate support by the students and marginal support by the faculty; perhaps parochial interests as discussed under Assumptions and Limitations are still present. The high index numbers indicate that this characteristic is probably important enough to add to the final list.

b. "3--Education--at least an MS with some emphasis in area taught." Received adequate support from students, administration, and alumni with only marginal support from the faculty. Since a small percentage of the faculty have education beyond the Master's, it appears that parochial interests may again cause the variability. But, as with industrial experience, the index numbers indicate this to be a relatively important characteristic.

c. "5--Innovativeness--originality, uses new techniques to promote learning." Once again the faculty offers marginal support while the students and alumni provide adequate support and the administration substantial support. This is surprising since one would expect students to be more interested in innovative techniques than the administration. The low index numbers indicate that although innovativeness is a desirable characteristic, it is probably not among the most important.

d. "7--Attitude--positive towards institution, department, and students." This characteristic is very closely identified with 10, Enthusiasm, which has already been singled out as an important indicator. They are so closely related in fact, that perhaps no distinction should be made between the two, and they should be combined in the final list.

e. "9--Communication skills--able to express self clearly with no major speech or writing defects." Well supported by all but the administration. The almost unanimous support is in keeping with the results of Kolstoe's Study(4:69-80). It is difficult to rationalize the lack of support by the administration. However, the high index rating by the students and faculty indicate that this is probably an important characteristic.

f. "24--Ethics--maintains a high professional standard." Only minimal support by all four categories of respondents. This is probably not an indicative characteristic.

g. "29--Dedication--committed to the teaching profession." Obtained minimal support by students and alumni but significant support by faculty and administration. Either students don't realize the dedication necessary to be a teacher or teachers and administrators over emphasize the amount required. In either case there was insufficient support for this characteristic to assure it a place in the list of most important.

In light of the above analysis, it is reasonable and appropriate to combine enthusiasm and attitude and add three more characteristics--Industrial experience, Education and Communication Skills--to our previous list of most important qualifications. Of course, industrial experience and education requirements are explicitly stated by the Engineering Council for Professional Development(1:89) but reitteration in our list is desirable because it is important to consider not only the quantity of education and industrial experience but also the quality of these assets.

Conclusions

Six characteristics which appear to be most indicative of an effective Engineering Technology Educator are:

1. Enthusiasm and Attitude - Enthusiastic and positive towards engineering technology, the institution and the students.
2. Practicality - More interested in application than in theoretical development.

3. Leadership - In control of the learning environment and able to motivate through desire not fear.
4. Communication Skills - Able to express self clearly with no major speech or writing defects.
5. Industrial Experience - At least two years of significant related experience within the past 10 years.
6. Education - At least a Master's degree with emphasis in the area taught.

Implementation and Recommendations

A copy of this report has been placed in the college library and a list of characteristics with a brief explanation has been sent to the administration and all faculty screening committees currently active at Southern Technical Institute with the recommendation that current and future applicants for teaching positions at this Institution be subjectively evaluated against the criteria.

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APPENDIX A

(1) Letter of Transmittal

(2) Questionnaire

(3) List of 35 Characteristics

SOUTHERN TECHNICAL INSTITUTE
MARIETTA, GEORGIA 30060

As part of my doctoral study at Nova University, I am conducting a survey in an attempt to identify the most significant personal characteristics of an effective Engineering Technology Educator. I need your help in obtaining the desired input. Please take a few minutes to complete the attached questionnaire and return it to me in the self-addressed envelope.

The results of this study will be a list of characteristics which may be used in evaluating faculty applicants. The list will of course not be comprehensive or absolute, but it should provide a guide to those characteristics which many of us feel are indicative of an effective engineering technology teacher. If you would like a copy of the results, please so indicate by enclosing a card with your name and address when returning the questionnaire.

Thank you for your cooperation.

Sincerely,

James W. Bannerman, P.E.
Head, Industrial Engineering Technology

JWB:db

Enclosure

A Unit of the Georgia Institute of Technology

ENGINEERING TECHNOLOGY FACULTY QUALIFICATION SURVEY

From the attached list of 35 personal characteristics, pick the 10 which you consider most indicative of an effective teacher in an engineering technology environment. (This will generally be a subjective judgement based on experiences and observations of colleagues or previous teachers.) List the identifying number of each selected characteristic in the space below. Do not attempt to rank the characteristics as to importance when making the selection or listing.

10 Very Important Characteristics

Reference Number

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Now review the above list and pick the 5 which you consider the most important. List the identifying numbers in order of importance in the space below. Finally, as an indication of relative importance, allocate 25 points among the 5 selected characteristics so that the most important characteristics receive the most points and each receive at least 1 point. (Remember the sum must equal 25 points.)

5 Most Important Characteristics

	Reference Number	Importance Points
1st	_____	_____
2nd	_____	_____
3rd	_____	_____
4th	_____	_____
5th	_____	_____
	Total	25

If you can think of any very important characteristics which have been omitted from the original list of 35, please enter them with a brief description in the space below:

_____

_____

_____

Characteristics of an Effective Teacher

(Select the 10 Most Important)

1. Appearance - well groomed, neat, clean
2. Industrial Experience - at least 2 years within the past 10
3. Education - at least an MS with some emphasis in area taught
4. Professional Registration - in the appropriate area, i.e., engineering, law, accounting, etc.
5. Innovativeness - originality, uses new techniques to promote learning
6. Responsibility - punctual, meets all classes, meets deadlines
7. Attitude - positive towards institution, department, and students
8. Patience - willing to recover material to accomodate slower students
9. Communication Skills - able to express self clearly with no major speech or writing defects
10. Enthusiasm - enthusiastic about engineering technology, the school and the students
11. Leadership - is in control of the learning environment and able to motivate through desire not fear
12. Fairness - impartial in grading procedures - no pets
13. Compassion - displays concern for individual student, open door policy
14. Age and maturity - between 30 and 50 years old
15. Teaching experience - the more the better
16. Membership in professional organizations - ASEE, NSPE, AIIE, ASME, etc.
17. Publication - has written articles or books on subject taught
18. Inolvement - participates in extracurricular activities
19. Charisma - attractive personality
20. Personal enrichment - involved in hobbies and non-academic activities
21. Peer compatibility - gets along well with colleagues
22. Consistency - sets and maintains consistent grading standards
23. Flexibility - willing to modify requirements to meet contingencies

24. Ethical - maintains a high professional standard

25. National recognition - well known by comtemporaries at other institutions

26. Advanced education degree - study beyond the Masters degree

27. Practicality - more interested in applications than in theoretical development

28. Cooperativeness - willing to accept committee assignments and night schedule

29. Dedication - committed to the teaching profession

30. Cool - ability to relate to and understand young people

31. Self-sacrificing - willing to sacrifice personal time to assist students

32. Financial status - ability to accept low salary without personal hardship

33. Ambitious - seeks advancement - not looking for resting place

34. Tactfulness - ability to "say it like it is" without insulting people

35. Sincerity - says what he means even though it may not be the popular opinion

APPENDIX B

TABULATION OF DATA

(1) Table II Student Data

(2) Table III Alumni Data

(3) Table IV Faculty Data

(4) Table V Administrative Data

TABLE II

STUDENT DATA

INDIVIDUAL IMPORTANCE VOTES, AVERAGE IMPORTANCE INDEX, AND PERCENT OF THE 35 STUDENT VOTES CAST FOR EACH CHARACTERISTIC

Characteristic	Importance Votes	Average Index	Percent of Vote
1	5 1	.17	6
2	2 6 1 5 5 5 2 6 6	1.08	26
3	6 3 2 5 7 5 8 10 3 5 10 5 5	2.11	37
4	8 2	.28	6
5	5 4 6 7 3 9 3 8 5 5 6 5	1.89	34
6	3 5 3 2 1 4	.51	17
7	4 4 5 7 5 8 1 5 5 6	1.43	29
8	5 2 7 5 10 6 5 3 4 10	1.63	29
9	5 10 10 4 5 8 4 7 7 5 5 5 5 6 5 5	2.74	46
10	7 2 10 5 3 5 5 6 3	1.31	26
11	5 7 5 5 5 10 5 4	1.31	23
12	3 5 4 5 5 5 5	.91	20
13	9 6 5 3 3 4 5 6 1 3	1.28	29
14		0.0	0
15	7 4 4	.42	8
16	4	.11	2
17		0.0	0
18		0.0	0
19	5	.14	2
20		0.0	0
21	2	.05	2
22	2 2 3 3	.28	11
23	4 4 5 7 5	.71	14
24	3 5 5 3 7 2 5 5 4	1.4	26
25	1	.02	2
26	6 5 7	.51	8
27	7 5 4 1 6 5 10 10 5 5 5 5 3	2.03	37
28		0.0	0
29	5 4 3 5 5	.62	14
30	5 5	.28	5
31	10 3 3 21 1 6 7	1.45	20
32		0.0	0
33	4 3	.20	5
34	5 5	.28	5
35	1 1	.05	5

TABLE III

ALUMNI DATA

INDIVIDUAL IMPORTANCE VOTES, AVERAGE IMPORTANCE INDEX, AND PERCENT OF THE 11 ALUMNI VOTES CAST FOR EACH CHARACTERISTIC

Characteristic	Importance Votes	Average Index	Percent of Vote
1		0.0	0
2	3 7 6 5 5	2.5	45
3	6 5 8	1.7	27
4	4	.36	9
5	5 4 2	1.0	27
6	3 2	.45	18
7	5 8 7	1.8	27
8	3	.27	9
9	3 4 1	.16	27
10	8 7 7 4 5 5 6 9 2	4.81	82
11	4 5 6 4 8 10	3.36	55
12	6	.55	9
13	3	.27	9
14		0.0	0
15	5	.45	9
16		0.0	0
17	5	.45	9
18		0.0	0
19		0.0	0
20		0.0	0
21		0.0	0
22	5	.45	9
23	3 3	.55	18
24	3 6	.82	18
25		0.0	0
26		0.0	0
27	5 8 7 5 5	2.7	45
28		0.0	0
29	4 5	.82	18
30		0.0	0
31	7	0.0	0
32		0.0	0
33		0.0	0
34	5	.45	9
35	4	.36	9

TABLE IV

FACULTY DATA

INDIVIDUAL IMPORTANCE VOTES, AVERAGE IMPORTANCE INDEX, AND PERCENT OF THE 14 FACULTY VOTES CAST FOR EACH CHARACTERISTIC

Characteristic	Importance Votes	Average Index	Percent of Vote
1		0.0	0
2	4 13 9	1.85	21
3	2 7 5	1.0	21
4	3 6	.64	14
5	7 8 1	1.14	21
6	4 6 10 6 3	2.07	35
7	4 2 8 5 7 10 2	2.71	50
8	4 4	.57	14
9	8 4 9 5 7 4 3 3	3.07	57
10	5 5 3 3 3	1.35	35
11	3 4 5 4 3	1.35	35
12	6 3 5	1.0	21
13	2 8 5	1.07	21
14		0.0	0
15	4 7	.78	14
16	3	.21	7
17	3	.21	7
18		0.0	0
19		0.0	0
20		0.0	0
21		0.0	0
22	2	.14	7
23		0.0	0
24	5 7	.85	14
25		0.0	0
26	5	.35	7
27	4 3 5 4 4 5	1.78	42
28	2	.14	7
29	10 2 9 2 4 10	2.64	42
30		0.0	0
31		0.0	0
32		0.0	0
33		0.0	0
34		0.0	0
35		0.0	0

TABLE V

ADMINISTRATIVE DATA

INDIVIDUAL IMPORTANCE VOTES, AVERAGE IMPORTANCE INDEX, AND PERCENT OF THE 11 ADMINISTRATIVE VOTES CAST FOR EACH CHARACTERISTIC

Characteristic	Importance Votes	Average Index	Percent Of Vote
1	2	.18	9
2	2 6 7 8 3 7 2 6	3.72	72
3	9 7 7 6 5	3.09	45
4	2	.18	9
5	4 4 5 3 8 4 1	2.63	63
6		0.0	0
7	5 4	.81	18
8	2	.18	9
9	8	.72	9
10	5 6 5 5 6 4 5 15	4.63	72
11	4 6 7 5	2.0	36
12		0.0	0
13	6 1	.63	18
14		0.0	0
15	3	.27	9
16		0.0	0
17		0.0	0
18		0.0	0
19		0.0	0
20		0.0	0
21		0.0	0
22		0.0	0
23		0.0	0
24	8 2 3	1.18	27
25		0.0	0
26		0.0	0
27	3 9 3 6 8	2.63	45
28		0.0	0
29	4 8 6 1	1.72	36
30	3	.27	9
31		.18	9
32		0.0	0
33		0.0	0
34		0.0	0
35		0.0	0

APPENDIX C

Letter of Implementation

SOUTHERN TECHNICAL INSTITUTE
MARIETTA, GEORGIA 30060

MEMORANDUM

TO: All STI Deans and Department Heads

FROM: J. W. Bannerman, Head, IET

SUBJECT: Selection Criteria for New Faculty Members

Some time ago I asked you to assist me with research I was conducting as part of my doctoral study at Nova University. The purpose of the investigation was to identify those characteristics or qualifications which might prove indicative of an effective educator in an engineering technology environment.

The study has now been completed and a copy of the abstract of the report is attached to this memo. A copy of the full report has been placed in the Southern Tech Library and it is suggested that members of departmental screening committees may find the information it contains useful in developing a criteria for the selection of new faculty members at Southern Tech. I am of course available for amplification or explanation as required.

JWB:db